

Dynamic registration of ejection from shock-loaded metals

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When a strong shock wave in the metal out on the border with air, from the surface is the release of microparticles. The phenomenon encountered in the measurement of the speed of the foil (glued to the explosive charge) using VISAR. Interest in this phenomenon is also associated with the development of instability and strength of materials in micro and nanoscale. Most experimental studies aimed at studying the ejection of particles from the shape and size of discontinuities (notches, grooves) on the surface of metals. The obtained data required for numerical simulation of emission of particles. In this work, the mass distribution along the jet was measured simultaneously by the piezoelectric transducer and x-rays using a soft spectrum of synchrotron radiation of the Collider VEPP-3. This work was supported by Russian Foundation for Basic Research (No. 16-29-01050)